

Project Design Phase-II Technology Stack (Architecture & Stack)

Date	17 October 2022
Team ID	PNT2022TMID00152
Project Name	Containment Zone Alerting Application
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

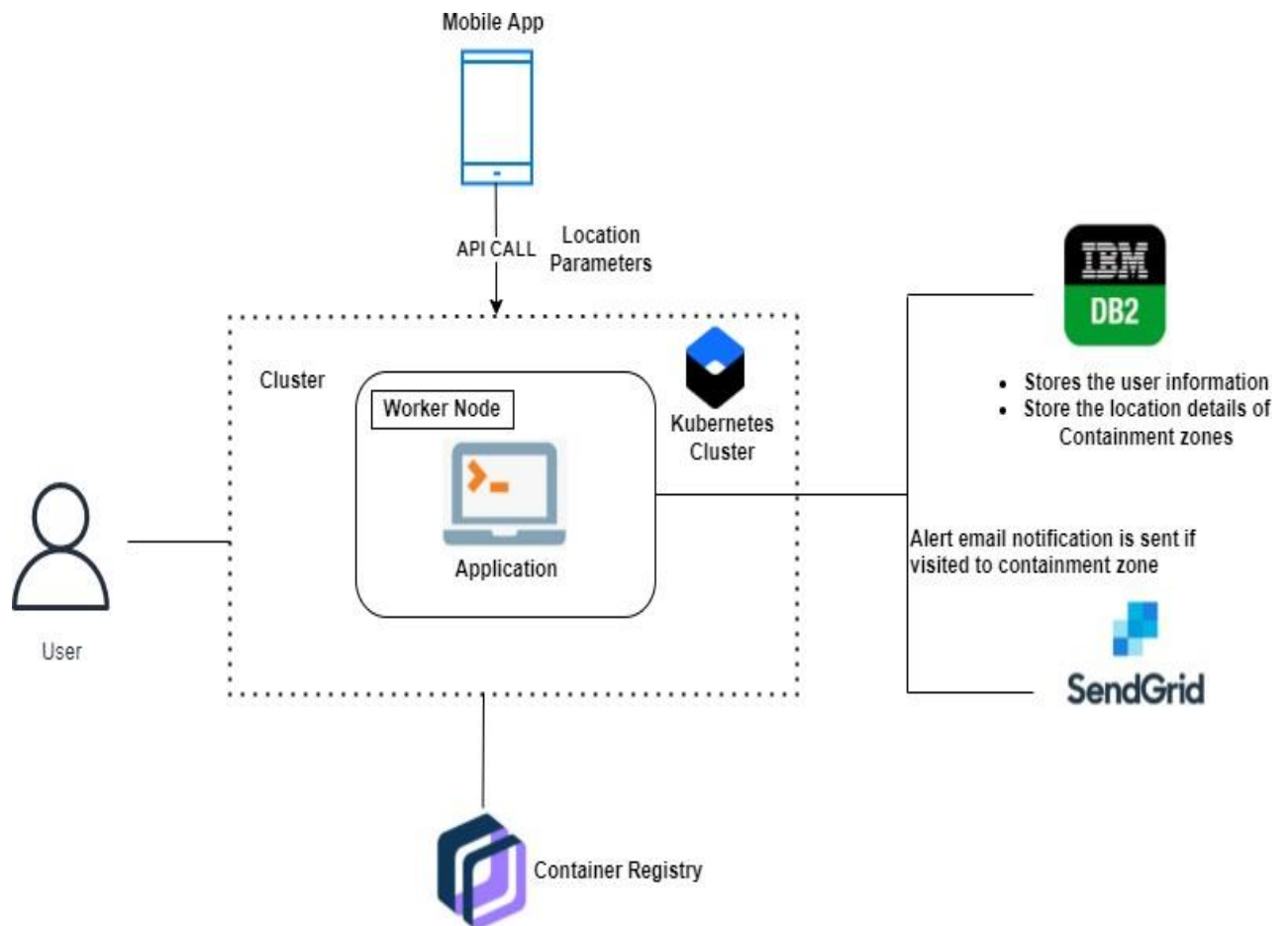


Table-1 : Components and Technologies:

S.No	Component	Description	Technology
1.	User Interface	User access to the application through the mobile application.	HTML, CSS, JavaScript, Flask
2.	Application Logic-1	Creating an application interface.	Python, Flask
3.	Application Logic-2	Creating an AI assistant that gives medical services to the user.	IBM Watson Assistance
4.	Application Logic-3	Sending notifications to the user if they enter the containment zone.	SendGrid services
5.	Cloud Database	The DB2 product is extended with the support of object-oriented features and non-relational structures with XML.	IBM DB2, IBM Cloudant etc.
6.	File Storage	Files are stored in the local storage as cache and stored in the cloud.	IBM Block Storage or Other Storage Service or Local Filesystem
7.	External API-1	Use this REST API to manage locations.	IBM Location REST API
8.	Machine Learning Model	Creating an algorithm to calculate covid case information provided by the health department.	Object Recognition Model, etc.
9.	Infrastructure (Server / Cloud)	IBMCloud App Configurations is a centralised feature-management and configuration service on IBM Cloud.	Cloud Foundry, Kubernetes.

Table-2 :Application characteristics :

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	There are no open-source frameworks in this application.	Python
2.	Security Implementations	Blockchain technology is used for security implementation; its private framework protects all data.	Blockchain
3.	Scalable Architecture	This application can be accessed from anyplace and monitoring users movements in pandemic zones and alerts before they are affected.	IBM Cloud
4.	Availability	The application uses the network to load the google maps to retrieve containment zones.It is available for a good range of network bandwidth.	GPS
5.	Performance	The geofencing is updated daily and shows the day-to-day updates containment zones.	Geofence